

the top of the water, and by degrees it began to move, and after flew about the Glas a perfect Gnat.

I have been the more particular, and large in the relation of the transformation of divers of these little Animals which I observ'd, because I have not found that any Authour has observ'd the like; and because the thing it self is so strange and heterogeneous from the usual progress of other Animals, that I judge it may not onely be pleasant, but very usefull and necessary towards the compleating of Natural History.

There is indeed in *Piso*, a very odd History, which this relation may make the more probable; and that is in the 2. Chapter of the 4. Book of his Natural History of *Brasil*, where he says, *Porro præter tot documenta fertilitatis circa vegetabilia & sensitiva marina telluris æmula, accidit & illud, quod paucis à Paranambucensi milliaribus, piscatoris uncum citra intentionem contingat insigi vadis petrosi, & loco piscis spongia, coralla, aliasque arbusculas marinas capi. Inter hæc inusitata formæ prodit spongiosa arbuscula, sesquipedis longitudinis, brevioribus radicibus, lapideis nitens vadis, & rupibus infixa, erigiturque in corpus spongiosum molle oblongum rotundum turbinatum: intus miris cancellis & alveis fabricatum, extus autem tenaci glutine instar Apum propolis undique vestitum, ostio satis patulo & profundo in summitate relicto, sicut ex altera iconum probe depicta videre licet* (see the third and fourth Figures of the 27. Scheme.) *Ita ut Apiarium marinum vere dixeris; primo enim intuitu è Mare ad Terram delatum, vermiculis scatebat cæruleis parvis, qui mox à calore solis in Muscas, vel Apes potius, easque exiguas & nigras transformebantur, circumvolantesque evanescebant, ita ut de eorum mellificatione nihil certi conspici datum fuerit, cum tamen carosa materia propolis Apumque cellæ manifeste apparerent, atque ipsa mellis qualiscunque substantia proculdubio urinatoribus patebit, ubi curiosius inquisiverint hæc apiaria, eaque in natali solo & salo diversis temporibus penitus lustrarint.*

Which History contains things sufficiently strange to be consider'd, as whether the husk were a Plant, growing at the bottom of the Sea before, of it self, out of whose putrifaction might be generated these strange kind of Magots; or whether the seed of certain Bees, sinking to the bottom, might there naturally form it self that vegetable hive, and take root; or, whether it might not be placed there by some diving Fly; or, whether it might not be some peculiar propriety of that Plant, whereby it might ripen or form its vegetable juice into an Animal substance; or, whether it may not be of the nature of a Sponge, or rather a Sponge of the nature of this, according to some of those relations and conjectures I formerly made of that body, is a matter very difficult to be determined. But indeed, in this description, the Excellent *Piso* has not been sufficiently particular in the setting down the whole process, as it were to be wish'd: There are indeed very odd progresses in the production of several kinds of Insects, which are not less instructive then pleasant, several of which, the diligent *Goedartius* has carefully observ'd and recorded, but among all his Observations, he has none like this, though that of the *Hemerobius* be somewhat of this kind, which is added as an Appendix by *Johannes Mey*.

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I have, for my own particular, besides several of them, observ'd divers other circumstances, perhaps, not so common, though very common, which do indeed afford us a new argument to admire the goodness and providence of the inventor in his most excellent contrivances and dispensations several times of the Summer, that many of the leaves of some Trees have been spotted, or, as it were scabbed, and looking on those of them that have been but a little irregular, I have observ'd them to be sprinkled with divers sorts of little Eggs, which I have found by degrees to grow bigger, and become little Worms, but still to keep their former places, and those places of their own accords, to be grown very protuberant upwards, and arched underneath, whereby those young creatures are shelter'd and housed from external injury; divers leaves I have found to grow and swell so far, as at length perfectly to inclose those which, by other observations I have made, I guess to come, as it were a womb to it, so long, till it be fit and ready to be translated into another state, at what time, like (what I have seen) the Worms, they gnaw their way through the womb that bred them, these kinds I have met with upon Gooseberry leaves, Raspberry leaves, Willow leaves, and many other kinds.

There are often to be found upon Rose-trees and other Trees, red tufts, which are certain knobs or excrescencies, growing from the Rind, or barks of those kinds of Plants, they are covered with kinds of threads or red hairs, which feel very soft, and are very pleasant. In most of these, if it has no hole in it, you shall find little Worms, which I suppose to be the causes of their production, that Worm has eat its way through, they, having performed their office, were design'd by Nature to do, by degrees die and wither.

Now, the manner of their production, I suppose to be the same as the wise Creator has as well implanted in every creature a desire to find out what place is convenient for the hatching, nutrition, and growth of their Eggs and of-springs, whereby they are stimulated to convenient places, which become, as 'twere the womb, to perform those offices: As he has also suited and adapted a place for those places whereby they grow and inclose those seeds, and when they are grown, provide a convenient nourishment for them, but when they have done the office of a womb, they die and wither.

The progress of inclosure I have often observ'd in those places where those seeds have been cast, have by degrees grown and inclos'd them, so perfectly round, as not to leave any passage out.

From this same cause, I suppose that Galls, Oak-apples, and other productions of that kind, upon the branches and leaves of Trees, have their original; for if you open any of them, when they are grown, you shall find a little Worm in them. Thus, if you open new Galls, you shall find either a hole whereby the Worm has